

## CLAIMS

Please amend claims 1, 3, 5, 7, and 8 as follows:

1 1. (Twice amended) A processing system for performing addition and subtraction within  
2 limits upon a shared value comprising:

3 means for performing a first uninterruptible operation upon the shared value  
4 stored in an affected reservation location, the first uninterruptible operation using an  
5 operand;

6 means for comparing a resulting value of the first uninterruptible operation stored  
7 in the affected reservation location to an upper value and a lower value to determine if the  
8 resulting value is within a range defined by the upper value and the lower value that can  
9 be changed [limit values stored in limit locations];

10 means for performing a second uninterruptible operation to restore the affected  
11 reservation location if the resulting value of the first uninterruptible operation is not  
12 within the range defined by the upper value and the lower value[limit values in the limit  
13 locations];

14 means for reporting a failure if the resulting value of the first uninterruptible  
15 operation is not within the range defined by the upper value and the lower value [limit  
16 values in the limit locations];

17 means for performing a third uninterruptible operation to update an actual value  
18 location if the resulting value of the first uninterruptible operation is within the range  
19 defined by the upper value and the lower value [limit values in the limit locations];

20 means for performing a fourth uninterruptible operation to update an unaffected  
21 reservation location if the resulting value of the first uninterruptible operation is within  
22 the range defined by the upper value and the lower value [limit values in the limit  
23 locations]; and  
24 means for reporting a success if the resulting value of the first uninterruptible  
25 operation is within the range defined by the upper value and the lower value [limit values  
26 in the limit locations].

- 1 2. (Previously presented) The processing system of claim 1 wherein the first, second,  
2 third, and fourth uninterruptible operations are LOCK XADD operations.

1 3. (Twice amended) A processing system for performing addition and subtraction within  
2 limits upon a shared value comprising:

3 means for receiving an operand;

4 means for performing a first uninterruptible operation upon the shared  
5 value stored in an affected reservation location, the first uninterruptible operation using  
6 the operand;

7 means for comparing a resulting value of the first uninterruptible operation  
8 stored in the affected reservation location to an upper value and a lower value to  
9 determine if the resulting value is within a range defined by the upper value and the lower  
10 value that can be changed [limit values stored in limit locations];

11 means for performing a second uninterruptible operation to restore the  
12 affected reservation location if the resulting value of the first uninterruptible operation is  
13 not within the range defined by the upper value and the lower value [limit values in the  
14 limit locations];

15 means for and reporting a failure if the resulting value of the first  
16 uninterruptible operation is not within the range defined by the upper value and the lower  
17 value [limit values in the limit locations];

18 means for performing a third uninterruptible operation to update an actual  
19 value location if the resulting value of the first uninterruptible operation is within the  
20 range defined by the upper value and the lower value [limit values in the limit locations];

21 means for performing a fourth uninterruptible operation to update an  
22 unaffected reservation location if the resulting value of the first uninterruptible operation

23 is within the range defined by the upper value and the lower value [limit values in the  
24 limit locations]; and  
25 means for reporting a success if the resulting value of the first  
26 uninteruptible operation is within the range defined by the upper value and the lower  
27 value [limit values in the limit locations].

1 4. (Previously presented) The processing system of claim 3 wherein the first,  
2 second, third, and fourth uninteruptible operations are LOCK XADD operations.

1           5. (Twice amended) A method for performing addition and subtraction within  
2 limits upon a shared value comprising the steps of:  
3           first, performing a first uninterruptible operation upon the shared value  
4 stored in an affected reservation location, the first uninterruptible operation using an  
5 operand;  
6           second, comparing a resulting value of the first uninterruptible operation  
7 stored in the affected reservation location to an upper value and a lower value to  
8 determine if the resulting value is within a range defined by the upper value and the lower  
9 value that can be changed [limit values stored in limit locations];  
10           third, performing a second uninterruptible operation to restore the affected  
11 reservation location;  
12           fourth, reporting a failure if the resulting value is not within the range  
13 defined by the upper value and the lower value [limit values in the limit locations];  
14           fifth, performing a third uninterruptible operation to update an actual value  
15 location if the resulting value is within the range defined by the upper value and the lower  
16 value [limit values in the limit locations];  
17           sixth, performing a fourth uninterruptible operation to update an  
18 unaffected reservation location if the resulting value is within the range defined by the  
19 upper value and the lower value [limit values in the limit locations]; and  
20           seventh, reporting a success if the resulting value is within the range  
21 defined by the upper value and the lower value [limit values in the limit locations].

1           6. (Previously presented) The method of claim 5 wherein the first, second, third,  
2           and fourth uninterruptible operations are LOCK XADD operations.

1           7. (Twice amended) A computer readable medium containing computer readable  
2           code comprising:

3                     a code segment for performing a first uninterruptible operation upon the  
4           shared value stored in an affected reservation location, the first uninterruptible operation  
5           using an operand;

6                     a code segment for comparing a resulting value of the first uninterruptible  
7           operation stored in the affected reservation location to an upper value and a lower value  
8           to determine if the resulting value is within a range defined by the upper value and the  
9           lower value that can be changed [limit values stored in limit locations];

10                    a code segment for performing a second uninterruptible operation to  
11           restore the affected reservation location;

12                    a code segment for reporting a failure if the resulting value is not within  
13           the range defined by the upper value and the lower value [limit values in the limit  
14           locations];

15                    a code segment for performing a third uninterruptible operation to update  
16           an actual value location if the resulting value is within the range defined by the upper  
17           value and the lower value [limit values in the limit locations];

18                    a code segment for performing a fourth uninterruptible operation to update  
19           an unaffected reservation location if the resulting value is within the range defined by the  
20           upper value and the lower value [limit values in the limit locations]; and

21 a code segment for reporting a success if the resulting value is within the  
22 range defined by the upper value and the lower value [limit values in the limit locations].

1 8. (Twice amended) A processing system for performing addition and  
2 subtraction within limits upon a shared value comprising:  
3 a processor, the processor  
4 performing a first uninterruptible operation upon the shared value  
5 stored in an affected reservation location, the first uninterruptible operation using an  
6 operand;  
7 comparing a resulting value of the first uninterruptible operation  
8 stored in the affected reservation location to an upper value and a lower value to  
9 determine if the resulting value is within a range defined by the upper value and the lower  
10 value that can be changed [limit values stored in limit locations];  
11 performing a second uninterruptible operation to restore the  
12 affected reservation location if the resulting value of the first uninterruptible operation is  
13 not within the range defined by the upper value and the lower value [limit values in the  
14 limit locations];  
15 reporting a failure if the resulting value of the first uninterruptible  
16 operation is not within the range defined by the upper value and the lower value [limit  
17 values in the limit locations];  
18 performing a third uninterruptible operation to update an actual  
19 value location if the resulting value of the first uninterruptible operation is within the  
20 range defined by the upper value and the lower value [limit values in the limit locations];

21 performing a fourth uninterruptible operation to update an  
22 unaffected reservation location if the resulting value of the first uninterruptible operation  
23 is within the range defined by the upper value and the lower value [limit values in the  
24 limit locations]; and  
25 reporting a success if the resulting value of the first uninterruptible  
26 operation is within the range defined by the upper value and the lower value [limit values  
27 in the limit locations].